

AMENDMENT TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

1. (currently amended) An FM signal receiver, comprising:

a bandpass filter for selecting a received burst signal;

a frequency-demodulation circuit for converting the burst signal selected by the bandpass filter from a frequency to a voltage;

an amplifier for amplifying the burst signal converted from the frequency to the voltage by the frequency-demodulation circuit;

an analog-to-digital converter circuit for converting to digital the burst signal fed via the amplifier for demodulation;

a control circuit for adjusting frequency characteristics of the bandpass filter and the frequency-demodulation circuit through an identical control signal immediately before a receiving operation; and

a shorting circuit provided between input and output terminals of the amplifier, the shorting circuit being opened during a the receiving operation and shorted during an adjusting operation.

2. (original) The FM signal receiver as set forth in claim 1, wherein the control circuit powers off the amplifier while the shorting circuit is being shorted.

3. (currently amended) An FM signal receiver, comprising:

a differential-type bandpass filter for selecting a received burst signal;

a differential-type frequency-demodulation circuit for converting the burst signal selected by the bandpass filter from a frequency to a voltage;

a differential-input, single-output amplifier for amplifying the burst signal converted from the frequency to the voltage by the frequency-demodulation circuit;

an analog-to-digital converter circuit for converting to digital the burst signal fed via the amplifier for demodulation;

a control circuit for adjusting frequency characteristics of the differential-type bandpass filter and the differential-type frequency-demodulation circuit through an identical control signal immediately before a receiving operation;

a reference voltage source for generating a reference voltage;

a switch for switching an input to the amplifier between an output signal of the differential-type frequency-demodulation circuit and the reference voltage fed from the reference voltage source; and

a memory for recording an output of the analog-to-digital converter circuit,

wherein the control circuit, in an adjusting operation, switches the switch to the reference voltage so

as to record the output of the analog-to-digital converter circuit made in response to application of the reference voltage in the memory; and subsequently switches the switch to the frequency-demodulation circuit so as to generate the control signal based on ~~an~~ the output value of the analog-to-digital converter circuit as recorded in the memory and adjust the frequency characteristics of the bandpass filter and the frequency-demodulation circuit through the identical control signal.

4. (currently amended) The FM signal receiver as set forth in claim 3, wherein the control circuit, in ~~an~~ the adjusting operation, generates a control signal by: first switching the switch to the reference voltage so as to produce a zero differential input signal and record in the memory ~~an~~ the output of the analog-to-digital converter circuit which is a signal representing an offset of the amplifier in that state; and subsequently switching the switch to the frequency-demodulation circuit and switching an input to the bandpass filter to a reference signal generator circuit to input a reference signal and subtract the value recorded in the memory from the output of the analog-to-digital converter circuit.

5. (currently amended) The FM signal receiver as set forth in claim 1, further comprising a reference signal generator circuit for outputting, in ~~an~~ the adjusting operation immediately before ~~a~~ the receiving operation, a

reference signal, instead of the burst signal, to the bandpass filter.

6. (currently amended) The FM signal receiver as set forth in claim 3, further comprising a reference signal generator circuit for outputting, in ~~an~~ the adjusting operation immediately before ~~a~~ the receiving operation, a reference signal, instead of the burst signal, to the bandpass filter.

7. (original) The FM signal receiver as set forth in claim 3, wherein the control circuit powers off the bandpass filter and the frequency-demodulation circuit while the switch is switched to the reference voltage.

8. (currently amended) The FM signal receiver as set forth in claim 1, further comprising a low pass filter between the frequency-demodulation circuit and the amplifier, the low pass filter being provided with a variable frequency characteristics circuit, frequency characteristics of the low pass filter being controlled together through ~~a~~ the control signal from the control circuit.

9. (currently amended) The FM signal receiver as set forth in claim 3, further comprising a low pass filter between the frequency-demodulation circuit and the amplifier, the low pass filter being provided with a variable frequency characteristics circuit, frequency

characteristics of the low pass filter being controlled together through a the control signal from the control circuit.

10. (original) The FM signal receiver as set forth in claim 1, wherein circuits in an analog section are complex circuits.

11. (original) The FM signal receiver as set forth in claim 3, wherein circuits in an analog section are complex circuits.

12. (currently amended) The FM signal receiver as set forth in claim 10, further comprising a reference signal generator circuit for outputting a reference signal, instead of the burst signal, to the bandpass filter in ~~an~~ the adjusting operation immediately before a the receiving operation,

wherein the burst signal and the reference signal are complex signals, the bandpass filter is a complex bandpass filter, and the frequency-demodulation circuit demodulates a complex signal.

13. (currently amended) The FM signal receiver as set forth in claim 11, further comprising a reference signal generator circuit for outputting a reference signal, instead of the burst signal, to the bandpass filter in ~~an~~ the adjusting operation immediately before a the receiving operation,

wherein the burst signal and the reference signal are complex signals, the bandpass filter is a complex bandpass filter, and the frequency-demodulation circuit demodulates a complex signal.

14. (currently amended) A wireless communications device, including an FM signal receiver comprising:

a bandpass filter for selecting a received burst signal;

a frequency-demodulation circuit for converting the burst signal selected by the bandpass filter from a frequency to a voltage;

an amplifier for amplifying the burst signal converted from the frequency to the voltage by the frequency-demodulation circuit;

an analog-to-digital converter circuit for converting to digital the burst signal fed via the amplifier for demodulation;

a control circuit for adjusting frequency characteristics of the bandpass filter and the frequency-demodulation circuit through an identical control signal immediately before a receiving operation; and

a shorting circuit provided between input and output terminals of the amplifier, the shorting circuit being opened during a the receiving operation and shorted during an adjusting operation,

wherein said wireless communications device further includes a high frequency amplifier, a mixer, an oscillator, an analog-to-digital converter, a digital-to-analog

converter, and a logic circuit, and uses the digital-to-analog converter as a reference signal generator circuit.

15. (currently amended) A wireless communications device, including an FM signal receiver comprising:

- a differential-type bandpass filter for selecting a received burst signal;

- a differential-type frequency-demodulation circuit for converting the burst signal selected by the bandpass filter from a frequency to a voltage;

- a differential-input, single-output amplifier for amplifying the burst signal converted from the frequency to the voltage by the frequency-demodulation circuit;

- an analog-to-digital converter circuit for converting to digital the burst signal fed via the amplifier for demodulation;

- a control circuit for adjusting frequency characteristics of the differential-type bandpass filter and the differential-type frequency-demodulation circuit through an identical control signal immediately before a receiving operation;

- a reference voltage source for generating a reference voltage;

- a switch for switching an input to the amplifier between an output signal of the differential-type frequency-demodulation circuit and the reference voltage fed from the reference voltage source; and

- a memory for recording an output of the analog-to-digital converter circuit,

wherein the control circuit, in an adjusting operation, switches the switch to the reference voltage so as to record the output of the analog-to-digital converter circuit made in response to application of the reference voltage in the memory; and subsequently switches the switch to the frequency-demodulation circuit so as to generate the control signal based on ~~an~~ the output value of the analog-to-digital converter circuit as recorded in the memory and adjust the frequency characteristics of the bandpass filter and the frequency-demodulation circuit through the identical control signal,

wherein said wireless communications device further includes a high frequency amplifier, a mixer, an oscillator, an analog-to-digital converter, a digital-to-analog converter, and a logic circuit, and uses the digital-to-analog converter as a reference signal generator circuit.